

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph 0016 on page 4 of the specification with the following rewritten paragraph:

When receiving aircraft data 115, symbol generator 110 creates a display list containing drawing instructions for the graphics engine 130. A conventional graphics engine 130 is capable of displaying the three primary colors (red, green, and blue) with multiple, independent intensities. In a conventional HUD, only the colors red and green are used. Accordingly, the blue color may be used to carry additional information. Graphics engine 130 processes the display list that is received from symbol generator 110 and produces, as output, a stream of pixel data to a color detector 140. Color detector 140 passes the red data over path 142 and the green data over path 144 to a display 150 and blue data over path 146 to symbol monitor 120. Display 150 may be any variety of pixelated pixilated displays, including, but not limited to a liquid crystal display (LCD). Further, display 150 may be a heads-up or a heads-down display although the disclosure describes primarily the use of display 150 in a heads-up display configuration. Certain symbols passed to display 150 may be characterized as "critical symbols" which that are critical to the operation of the aircraft, are necessary for critical operations of the aircraft, and/or are identified as such through certification standards. Each critical symbol has associated with it, and X, Y display position, as well as a unique identifier or tag which that identifies the type of symbol being displayed. The symbol generator 110 places instructions in a display list to locate the symbol in the correct X and Y position in the blue pixel buffer of graphics engine 130. The intensity level associated with the symbol is the ~~symbol's~~ symbol's identifier or tag. Accordingly, the number of identifiers is limited only by the number of blue pixel intensity values and/or by the number of states of intensity which that color detector 140 can detect.

Please replace paragraph 0017 on page 5 of the specification with the following rewritten paragraph:

Color detector 140 processes the stream of pixel data from graphics engine 130 and sends red and green pixel data to display 150 over ~~channels~~ paths 142

and 144. Blue pixel X and Y positions are detected by a the color detector 140 and stored for access by symbol monitor 120 over path 146. ~~System~~ Symbol monitor ~~processor~~ 120 provides verification that the symbols displayed are placed in the proper location and/or are the correct symbol. Each blue pixel intensity is used to uniquely identify the symbol being used. Symbol monitor 120 may also determine which symbol is being drawn and where it is being drawn from the information received from color detector 140. Symbol monitor 120 reads the detector symbol position data from color detector 140 and uses the data to determine what sensor input value ~~would be~~ is required to position the symbol in that unique position. The sensor input values are produced through an inverse processing process. The inverse processing may be a matrix inversion for linear processes or an inverse function for linear or nonlinear relationships. Symbol monitor 120 compares the computed value with the actual input sensor data 115. If a miscompare is computed between display data from graphics engine 130 and the actual aircraft data 115, then a display path error exists, and the display is blanked of the symbol. Further, in an exemplary embodiment, symbol monitor 120 also transmits the symbol position data to test equipment external to the heads up guidance system (HGS).